## UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

Page 1 of 3

PATENT NO. : 7,672,447 B2

APPLICATION NO.: 09/584,796

ISSUE DATE: March 2, 2010

INVENTOR(S) : Lindqvist, et al.

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

On Page 2, in Field (56), under "OTHER PUBLICATIONS", in Column 1, Line 8, delete "Enchede," and insert - Enschede - -, therefor.

In Fig. 7, Sheet 5 of 8, for Tag "104", Line 1, delete "V<sub>i</sub>." and insert - - V<sub>i</sub>, - -, therefor.

In Column 1, Line 43, delete "General" and insert - - Generally - -, therefor.

In Column 2, Line 52, delete "symbols." and insert - - symbol. - -, therefor.

In Column 2, Line 53, after "is" insert - - (L+N) - -.

In Column 5, Line 33, delete "of" and insert - - for - -, therefor.

In Column 5, Line 51, in Equation (1), delete " $X_i=[X_i(0), X_1(1),]$ " and insert -  $X_i=[X_i(0), X_i(1),]$  - -, therefor.

In Column 6, Line 2, delete "receiving" and insert - - received - -, therefor.

In Column 6, Line 10, in Equation (4), delete " $x_i=QX_i$ " and insert - -  $s_i=QX_i$  - -, therefor.

In Column 7, Line 9, delete " $N\times I$ " and insert -  $N\times 1$ ) - -, therefor.

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In Column 9, Line 10, delete " $E_i = \hat{Y}_i = \hat{Y}_i$ " and insert -  $E_i = \hat{Y}_i - \hat{Y}_i$  - -, therefor.

In Column 9, Line 57, delete "Ximag,<sub>1</sub>" and insert - - Ximag,<sub>i</sub> - -, therefor.

In Column 9, Line 60, Equation (24), delete "(N/2)<sup>t</sup>" and insert - (N/2)<sup>T</sup> - - , therefor.

In Column 10, Line 25, after "further" insert - - defined - -.

In Column 10, Line 26, delete "N-1" and insert - - L-1 - -, therefor.

In Column 11, Line 42, in Equation (40), delete " $\hat{Y}_i = V \cdot X_i + Z_i (X_i - \overline{X}_{i-1})$ ," and insert --  $\hat{\mathbf{Y}}_i = \mathbf{V}_i \bullet \mathbf{X}_i + \mathbf{Z}_i (\mathbf{X}_i - \overline{\mathbf{X}}_{i-1})$ , therefor.

In Column 11, Line 63, in Equation (43), delete " $Z_{i+1}Z_i + \mu E_i(X_i^* - \overline{X}_{i-1}^*)^T$ ", and insert -  $\mathbf{Z}_{i+1} = \mathbf{Z}_i + \mu \mathbf{E}_i \left( \mathbf{X}_i^* - \overline{\mathbf{X}}_{i-1}^* \right)^T$  - -, therefor.

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In Column 13, above Equation 47,

insert -- 
$$\mathbf{V}_{i+1} = \mathbf{V}_i + \mu \mathbf{E}_i \bullet (\mathbf{X} rep_i^*)^T$$
 (46)

In Column 13, Line 5, Equation (47), delete " $V_{i+1} = V_{i+\mu E_i} (X_i^* - \overline{X}_{i-1}^*)^T$ " and insert -  $\mathbf{Z}_{i+1} = \mathbf{Z}_i + \mu \mathbf{E}_i (\mathbf{X}_i^* - \overline{\mathbf{X}}_{i-1}^*)^T$  - -, therefor.

In Column 13, Line 37, delete " $\{(V_i \cdot x_i)_1 q\}$ " and insert - -  $\{(V_i \cdot x_i)_1 q\}$  - - , therefor.

In Column 13, Line 51, in Equation (51), delete " $Z_{i+1} = Z_i + \mu Erep_i (X_i^* \cdot \overline{X}_{i-1}^*)^T$ ", and insert --  $\mathbf{Z}_{i+1} = \mathbf{Z}_i + \mu Erep_i (\mathbf{X}_i^* - \overline{\mathbf{X}}_{i-1}^*)^T$  --, therefor.

In Column 14, Line 43, delete "(29)." and insert - - (39). - -, therefor.

In Column 16, Line 59, in Claim 17, after "remove" insert - - the transformed estimate - -.

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